

# **SYSTEMS AND METHODS FOR PREVENTING UNAUTHORIZED USE OF ROAMING NUMBERS IN A WIRELESS TELECOMMUNICATIONS SYSTEM**

## **ABSTRACT OF THE DISCLOSURE**

Systems and methods for preventing unauthorized use of roaming numbers in a wireless telecommunications system. Upon receipt of a call request for a mobile terminal at a Gateway Mobile Switching Center (GMSC), the GMSC queries a Home Location Register (HLR). The HLR requests a roaming number for the mobile terminal from a Mobile Switching Center (MSC). The MSC allocates a roaming number for the mobile terminal, assigns an authentication code, and sends to the HLR. The HLR receives the roaming number and authentication code and relays to the GMSC. The GMSC sends a call setup request to the MSC; the call setup request includes the roaming number and the authentication code. The MSC confirms the authentication code and, if the authentication code for the roaming number is confirmed, completes the call request to the mobile terminal.

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